Vocabulary for 3-7

1. **Coordinates**. Two numbers expressed as an x,y pair in parenthesis: (x,y). The numbers represent the x and y coordinates of a point in the coordinate plane. Example: (3,-1) refers to the point 3 in the (positive) x-direction and one down (negative) in the y-direction.
2. **Slope**. The variable representing the “steepness” of a line. The greater the number, the greater the steepness of the slope. Slope can be **positive** (slope up to the right), **negative** (slope down to the right), **zero** (horizontal line) or **undefined** (vertical line).
3. **x-axis**. The number line on a coordinate plane representing the horizontal axis.
4. **y-axis**. The number line on a coordinate plane representing the vertical axis.
5. **Point-slope form**. The equation of a line in the form of

**y – y1 = *m*(x – x1)**

The variable *m* is the **slope** of the line and x1 and y1 represent a point on the line. For example a line with slope 3 and through the point (5,-2) would be written as:

**y – (-2) = 3(x – 5)** *or* **y + 2 = 3(x – 5)**

*Which equations are written in point-slope form?*

1. *y + 5 = 3x + 14 b) y – 2 = ¼ (x - 3)*
2. *y = 7x + 2 d) y + 3 = 4(x + 1)*
3. **Slope-intercept form**. The equation of a line in the form of

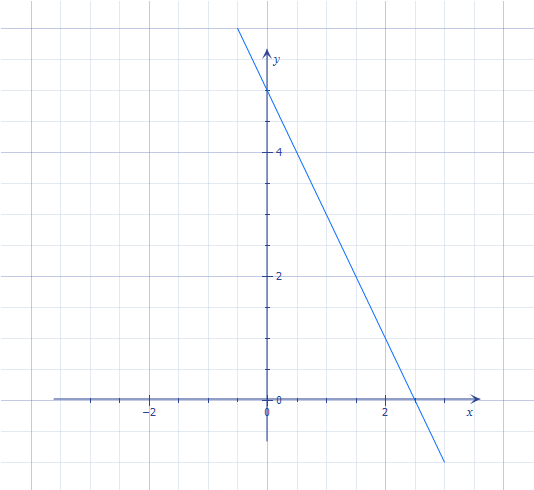
**y = mx + b**

where *m* is the slope of the line and *b* is the y-intercept. For example, a line with slope -2 and y-intercept 5 would be written as:

**y = -2x + 5**

1. **Y-intercept**. The point where a line crosses the y-axis.

Example:

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